

Remarks

Applicants wish to thank the Examiner for the courtesies extended to the undersigned during the telephone interview. An Interview Summary accompanies this response.

Applicants also appreciate the recognition of patentable subject matter in the present application. Applicants request reconsideration of the rejections for the reasons herein.

Applicants hereby add new claims 35-39 which are supported at least by the teachings of paragraphs 0026-0034 of the specification.

Claims 1-30 stand rejected under 35 USC 112, second paragraph, for indefiniteness. Claims 13, 18-21, and 31 stand rejected under 35 USC 102(e) for anticipation by U.S. Patent Publication No. 2003/0137698 A1 to Pritchard.

Referring to the indefiniteness rejections, 35 U.S.C. §112, second paragraph, requires that the claims particularly point out and distinctly claim the subject matter that the patent applicant regards as their invention. "Distinctly" has been interpreted to mean simply that the claim must have a clear and definite meaning when construed in the light of the complete patent document. *Standard Oil Company v. American Cyanamid Company*, 774 F.2d 448, 227 USPQ 293 (Fed. Cir. 1985). Further, the definiteness of the claim language employed must not be analyzed in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one of having ordinary skill in the pertinent art.

Applicant refers to MPEP §2173.02 (8th ed., rev. 6) which states the essential inquiry pertaining to a §112, second paragraph requirement is whether the claims set out and circumscribe a particular subject matter with a reasonable degree of clarity and particularity. Definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) the content of the particular application disclosure;
- (B) the teachings of the prior art; and
- (C) the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made.

In reviewing a claim for compliance with 35 U.S.C. §112, second paragraph,

*Serial No. 10/703,878
Case 200308932-1
Amendment A*

the Examiner must consider the claim as a whole to determine whether the claim apprises one of ordinary skill in the art of its scope and, therefore, serves the notice function required by 35 U.S.C. §112, second paragraph by providing clear warning to others as to what constitutes infringement of the patent. MPEP §2173.02 (8th ed., rev. 6). A fundamental principle contained in 35 U.S.C. 112, second paragraph is that applicants are their own lexicographers and they can define in the claims what they regard as their invention essentially in whatever terms they choose. MPEP §2173.01 (8th ed., rev. 6).

Applicant respectfully submits that the claims are clear and definite on their face. Moreover, one of ordinary skill in the art with the opportunity to consider and review the contents of the application disclosure pursuant to the above authority would understand the language of the claims. The Office at page 2 of the action defines independent processing as processing a subset without regard for the others. Applicants respectfully submit that Applicants have not used such terminology in the specification or claims. To the contrary, Applicants have disclosed at paragraph 0026 independent processing aspects according to example embodiments of the disclosure.

Applicants respectfully submit that one of ordinary skill in the art would understand claim 1 when read in combination with the teachings of the example embodiments of the specification. The use of a common modulation pattern in modulation of thresholds of the pixels of the overlapping region is consistent with the independent processing teachings of the specification including the example embodiments described at paragraphs 0026-0034 and Applicants respectfully submit that the claim would be understood and definite to one of ordinary skill in the art. Applicants respectfully submit that the claims which depend from claim 1 are also definite to one of ordinary skill in the art. Withdrawal of the 112 rejection of claim 1 is respectfully requested.

Referring to the 112 rejection of independent claim 13, Applicants have not used terminology that subsets are processed without regards of others as stated by the Office on page 2 of the Action. Applicants have disclosed at paragraph 0026 of the specification independent processing aspects according to example embodiments of the disclosure. The example disclosed embodiments clearly teach independent processing of plural subsets including processing image data of pixels

of one of the subsets using image data of pixels of another of the subsets. Applicants respectfully submit that one of ordinary skill in the art would consider claim 13 to be definite when read in combination with the teachings of the example embodiments of the specification. Applicants respectfully submit that the claims which depend from claim 13 are also definite to one of ordinary skill in the art. Withdrawal of the 112 rejection of claim 13 is respectfully requested.

Referring to claim 19, and without admitting to the propriety of the 112 rejection, Applicants have replaced "intermediate" with "between" in an attempt to further the prosecution of the present application. Withdrawal of the 112 rejection of claim 19 is respectfully requested.

Applicants have not used terminology that subsets are processed without regards of others in the specification or in independent claim 21 as stated by the Office on page 3 of the Action. Furthermore, the claimed terminology of a plurality of processors configured to independently process the image data of respective ones of the subsets and an individual one of the processors is configured to implement processing of image data of one of the subsets using image data of another of the subsets is consistent with disclosed example embodiments of the specification including paragraph 0026. Applicants respectfully submit that one of ordinary skill in the art would consider claim 21 to be definite when read in combination with the teachings of the example embodiments of the specification. Applicants respectfully submit that the claims which depend from claim 21 are also definite to one of ordinary skill in the art. Withdrawal of the 112 rejection of claim 21 is respectfully requested.

Referring to claim 29, the Office at page 3 defines independent processing as processing a subset without regard for the others. Applicants respectfully submit that Applicants have not used such terminology in the specification or claim 29. The claimed limitations of processing an individual one of the subsets using one of the independent processing means using the same threshold modulation of the thresholds as the processing of the same pixels using an other of the independent processing means is consistent with the example disclosed embodiments of the specification including for example paragraph 0026. Applicants respectfully submit that one of ordinary skill in the art would understand claim 29 to be definite when considered in combination with the teachings of the example embodiments of the

specification. Applicants respectfully submit that the claims which depend from claim 29 are also definite to one of ordinary skill in the art. Withdrawal of the 112 rejection of claim 29 is respectfully requested.

Referring to the 102 rejection of independent claim 13, claim 13 recites *independently processing image data of the subsets using error diffusion*, wherein the *error diffusion processing of image data of pixels of one of the subsets comprises processing using image data of the pixels of an other of the subsets*. Applicants respectfully submit that Pritchard fails to teach the claimed limitations when properly considered consistently with the teachings of the specification.

Applicants note that *patent application claims are interpreted consistent with the specification*. *In re Yamamoto*, 740 F2d 1569, 1571 (Fed. Cir. 1984). Applicants refer to the teachings of paragraph 0026 which provides an embodiment where processing of a subset occurs without knowledge of processing of another subset. To the contrary of the above-recited limitations, Pritchard teaches at paragraphs 0031-0037 that processors 702-708 process respective segments and paragraph 0036 discussing Fig. 6 of Pritchard provides that values processed for one segment are used during processing of an adjacent segment. Pritchard clearly teaches processing of one subset using processing of another subset which fails to teach or suggest independently processing image data of the subsets when interpreted consistently with the application disclosure.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art and claim 13 recites allowable subject matter for at least this reason. Applicants respectfully request reconsideration of the rejection for at least these compelling reasons.

The claims which depend from independent claim 13 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, referring to claim 19, paragraphs 0036 – 0037 of Pritchard clearly provide communications intermediate the processors 702-708 using bus 718. Applicants respectfully submit that claim 19 reciting that the *independent processing comprises processing without using communications between the processors is not disclosed* by Pritchard. Applicants respectfully request

reconsideration of the 102 rejection for at least this compelling reason.

Referring to the prior art rejection of independent claim 21, paragraphs 0031-0037 of Pritchard teach that respective segments are processed by respective processors. Paragraph 0035 and Fig. 6 of Pritchard clearly teach that values processed by one processor are transferred across a boundary between segments and the other processor uses the received values generated by the one processor to process its respective segment. Independent claim 21 recites that the *processors are configured to independently process the image data of respective ones of the subsets*. The claim limitations are interpreted consistently with the specification which provides an embodiment at paragraph 0026 where a processor operates independently to process image data of one subset without knowledge of processing of image data of other subsets by other processors. Clearly, one processor of Pritchard processing one segment uses values provided by another processor processing an adjacent segment which fails to teach the above-recited claimed limitations when properly considered with the teachings of the specification.

Furthermore, Pritchard teaches at paragraph 0036 that a pixel is halftoned and four error terms or values are generated by halftone processing and an error term or value may be transferred across the boundary for processing of an adjacent segment by a different processor. Accordingly, Pritchard teaches use of an error term as opposed to image data content of a pixel which fails to teach or suggest the limitations that *one of the processors is configured to implement the processing of one of the subsets using image data of an other of the subsets* as claimed.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art and claim 21 recites allowable subject matter for at least this reason. Applicants respectfully request reconsideration of the rejection for at least these compelling reasons.

The claims which depend from independent claim 21 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to independent claim 31, the claim recites *programming configured to cause one of the independent processing circuits to process image data of pixels*

of one subset using image data of pixels of an other subset of image data. Pritchard teaches one processor transferring *error terms* resulting from prior processing across a segment boundary to another processor as opposed to transfer or usage of the image data to the other processor which fails to teach or suggest the above-recited limitations.

Furthermore, claim 31 clearly recites the limitations with respect to one of a plurality of independent processing circuits. The claim limitations are interpreted consistently with the specification which provides an example embodiment at paragraph 0026 that processors operate independently to process image data of respective subsets without knowledge of processing of image data of other subsets by other processors. Pritchard explicitly discloses one processor generating error terms which are used by an adjacent processor to process an adjacent segment which fails to teach the limitations of one of the independent processing circuits when properly considered with the teachings of the present application.

Applicants respectfully submit that positively-recited limitations of the claims are not disclosed nor suggested by the prior art and claim 31 recites allowable subject matter for at least this reason. Applicants respectfully request reconsideration of the rejection for at least these compelling reasons.

The claims which depend from independent claim 31 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Applicants respectfully request allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

Respectfully submitted,
Zhen He et al.

By:



James D. Shaurette

Reg. No. 39,833

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